I. AMENDMENTS TO THE CLAIMS

Claims 1-69 (Canceled)

70. (Currently Amended) A process for treating fibroses comprising administering a therapeutically effective amount of a pharmaceutical composition comprising at least one biocompatible polymer having the general formula (I):

$A_aX_xY_yZ_z$,

wherein

A is a glucose monomer;

X is $-CH_2-COOH$ or $-CH_2-COO-NA^+$;

Y is SO_3;

Z is selected from the group consisting of: phenylalanine, [[or]] tyrosine, phenylalanine methylester and tyrosine methylester;

a represents the number of monomers A such that the mass of said polymers of formula (I) is greater than approximately 5,000 Da;

x represents the substitution rate of the monomers A by the group X, and x is 28.9% when Z is ~~Phe~~ phenylalanine or phenylalanine methylester and 19.8% when Z is ~~Tyr~~ tyrosine or tyrosine methylester,

y represents the substitution rate of the monomers A by the group Y, and y is 56.2% when Z is ~~Phe~~ phenylalanine or phenylalanine methylester and 65.9% when Z is ~~Tyr~~, tyrosine or tyrosine methylester and

z represents the substitution rate of the monomers A by the group ~~Y~~ Z and z is 17.9% when Z is ~~Phe~~ phenylalanine or phenylalanine methylester and 28.9% when Z is ~~Tyr~~ tyrosine or tyrosine methylester

wherein when Z is phenylalanine or phenylalanine methylester, A is a glucose monomer on which X is grafted by the intermediary of the hydroxyl function in position 2, Y is bonded to the nitrogen of Z or grafted by the intermediary of the hydroxyl function in positions 3 or 4, and Z is bonded to X, and

wherein when Z is tyrosine or tyrosine methylester, A is a glucose monomer on which X is grafted by the intermediary of the hydroxyl function in position 2, Y is bonded to the nitrogen and hydroxyl group of Z or grafted by the intermediary of the hydroxyl function in positions 3 or 4, and Z is bonded to X,

and wherein in an *in vitro* assay of pig aorta smooth muscle cells cultured on a medium with fetal calf serum, L-glutamine, and penicillin-streptomycin, said polymer decreases the rate of Type I and Type III collagen synthesis and increases the secretion of Type V collagen.